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Notes**

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**Agri-Business Notes**

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**Horticulture Notes**

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# Ag Beat

**North Central Missouri  
Agriculture Newsletter**

Putnam, Sullivan, Linn,  
and Schuyler Counties

**PESTICIDE APPLICATOR TRAINING FOR 2007**

January 22 <sup>nd</sup>	Brookfield Area Career Center Brookfield	1:30 p.m. & 7:00 p.m.
January 23 <sup>rd</sup>	Macon County Extension Center 113 N. Rubey, Macon	1:30 p.m. & 7:00 p.m.
January 30 <sup>th</sup>	Randolph County Extension Center 100 W. Sparks, Moberly	1:30 p.m. & 7:00 p.m.
February 1 <sup>st</sup>	Putnam County Courthouse Old Soldiers Room, Unionville	1:30 p.m. & 7:00 p.m.
February 13 <sup>th</sup>	Sullivan County USDA Building 23487 Eclipse Dr., Milan	3:00 p.m. & 7:00 p.m.
February 22 <sup>nd</sup>	Adair County Extension Center 503 E Northtown, Kirksville	3:00 p.m. & 7:00 p.m.

**PUTNAM COUNTY'S EXTENSION INFORMATION NIGHT  
AND ANNUAL SWCD MEETING**

Wednesday, February 7, 2007  
6:00 p.m. (meal provided)  
Putnam County High School  
Unionville

**FORAGE PRODUCTION UPDATE**

Monday, February 12, 2007  
6:30 p.m.  
Brookfield Area Career Center Conference Room  
Brookfield MO

**MISSOURI'S COMPLICATED FENCE LAW**

Thursday, February 15, 2007 and  
Monday, March 19, 2007  
7:00 p.m. to 9:30 p.m.  
Kirksville TCRC  
315 South Franklin  
Kirksville MO  
\$5 per person charge for materials  
Pre-registration requested by calling 660-947-2705

**CROPS PEST UPDATE/FARMERS FORUM**

Monday, February 19, 2007  
6:30 p.m.  
Brookfield Area Career Center Conference Room  
Brookfield MO



# Farm Management Notes

Joseph Koenen

(660) 947-2705

## INCOME TAX RESOURCES & CONCERNS

Income tax time can be an especially stressful one for many folks, farmers in particular. One thing that can help make it less stressful for you is to know where you can find resources to assist you with taxes. I want to discuss several of those resources in this article.

--- *Farmer's Tax Guide* – this yearly publication has information on the tax laws and tax management for farmers. It is Publication 225 and is available at your county Extension Office. You can also get it off of the web at [www.irs.gov](http://www.irs.gov) under publications although it may take a long time to download depending on your Internet access. The Farmer's Tax Guides is an excellent reference to have in your files to answer questions and look back to. It also has important dates to remember as far as taxes. There is no charge.

--- *1099 forms* – these forms are the ones that must be sent to anyone that is not your employee that you pay \$600 or more to in a year. The most common 1099 form is MISC which covers custom work and other non-employee compensation. These forms (along with the summary 1096) are available at your county Extension Office also (they are not available off the web). Since they cost us there is a small fee for these forms.

--- *Income tax forms* – many of you either don't get certain tax forms or may need

one from other states. The web is a great place to get these now instead of having to call or write someone. Each of our offices can help get these for you by printing them off for a small charge. You can also get them yourself off of the web at the [www.irs.gov](http://www.irs.gov) site. All forms can be downloaded with the exception of 1099's and a few uncommon ones.

--- *IRS publications* – the IRS has tax publications on almost every topic. They are detailed booklets that explain such things as depreciation, Agricultural Employer's Tax Guide, Taxable and Non-taxable Income and many others. You can also find these online at <http://www.irs.gov/formspubs/lists/0..id=97819.00.html>. Again, they are fairly large so keep that in mind if you want to print them off.

--- *Farm record books* – the best way to keep good income tax records for your tax preparer is to have good up-to-date business records. Your county Extension Office has 2 different types of farm record books to fit your needs. One is fairly simple while the other one is much more detailed. The Blue Book is the simpler, more inexpensive one while the Red Book has individual pages that can be purchased after you get the initial book. If you're interested in looking at and comparing computer programs for farmers, you can go to <http://agebb.missouri.edu/mgt/mofar/index.htm>.

Finally, don't forget that your Agricultural Business Specialist has some additional resources such as income tax reference books. They will be glad to assist you with individual questions and issues as well. Keep in mind that you can contact your preparer

**about your individual problems and questions too.**

## **UPCOMING WINTER PROGRAMS**

**Winter is the time of year that producers and landowners have the time to attend meetings. Here are some upcoming ones in the next month or two that you can (and hopefully are) interested in attending.**

~ February 7<sup>th</sup> – Putnam County's Extension Information Night & Annual SWCD Meeting is an annual event that updates producers and homeowners on topics that interest them. It starts at 6:00 p.m. and a meal is provided courtesy of several local businesses. It is being combined this year with the annual Soil and Water Conservation District (SWCD) meeting and award presentations. **Topics for the programs will include:** *utilizing by-product feeds – helping your bottom line; cash rental rates and land values – what does the future hold; critters, crawlers and sick plants; pasture management (fescue toxicosis) – what's new?; a horse health program for all year around; myths and truths about trees and recreational hunting leases – what you need to know and several others.* It is held at the Putnam County High School in Unionville and is open to all interested persons. There is no cost to attend and no pre-registration is necessary!

~ February 15<sup>th</sup> or March 19<sup>th</sup> – Missouri's Complicated Fence Law is a topic that is still very confusing to landowners. There are 2 different laws depending on the county in which your land is in and many other issues to know. This meeting starts at 7:00 p.m. and goes until 9:30 p.m. at the TCRC (315 South Franklin) in Kirksville. There is a \$5 per person charge for materials. Pre-registration is requested but not necessary for this program either. Both dates are the same program so you can pick the one that works best for you.

~ February 22<sup>nd</sup> – Memphis Dairy Day is the premier event for dairy producers in North Missouri. It goes from 10 a.m. to 3 p.m. and will be held at the Scotland County Community Center which is on Hwy 136 this year. Lunch is provided and several dairy-related businesses have booths there that day. **Topics this year will include:** *feeding management strategies to overcome high feed costs; reaching herd reproduction goals by managing herd health and why we still dry cow treat.* **There is no cost to attend this meeting as well and no pre-registration is necessary.**

~ March 15<sup>th</sup> – Schuyler County's Extension Information Night & Annual SWCD Meeting is very similar to Putnam's on the 7<sup>th</sup> of February. It is held at the School in Queen City. **Pre-registration is requested** for this one by contacting the Schuyler County Extension Office (660) 457-3469.

~ Private Pesticide Applicator Training **will be held again this winter. Many of your licenses will be expiring this year and you will need to attend these training sessions.** They are being done in the afternoons and evenings so you can choose the best time for you. These dates, times and locations are on the front page of the newsletter.

**You can contact your county Extension Office to get more information on the meeting(s) that you are interested in. You can also keep up with programs on the county's web page which is [www.extension.edu/countyname](http://www.extension.edu/countyname) (Linn, etc. where county name is) and click on calendar. Keep in mind that you can contact your local office for specific information on any topic also.**

# HORT NEWS

**Jennifer Schutter**  
**660-665-9866**



## WINTER GARDENING TIPS

The holidays are over and it's now time to start thinking about gardening again. Although you may have received a few seed catalogs along with your holiday cards, most companies target January as the month for their catalogs to arrive in your mailbox. For some people, these catalogs are junk mail, but for gardeners, seed catalogs provide many hours of reading, dreaming, and deciding what seeds and plants to order for the upcoming gardening season.

Most companies have sufficient quantities of seed to fill orders, but it's wise to get your order in early to ensure that you will get the seeds and plants that you want. Many companies offer "early bird discounts" or free packets of seeds to encourage people not to wait until the last minute to order. If you plan to grow your own plants, remember that some like petunias and snapdragons should be started in late February, another incentive to order early.

Now is a good time to take inventory of your propagation supplies for starting seeds. Check quantities of potting soil, containers, labels, other supplies, as well as seeds you may have stored from previous years. Sterilize any used containers you plan to use with a 10 percent bleach solution (one part bleach to ten parts water). If you have seeds that are more than a couple years old, sow a few to check their germination rate. To do this, place 10 seeds between two sheets of moist paper towels and tuck into a loosely tied plastic bag. Place in a warm area, and check on them every few days. If germination is less than 80 percent, consider purchasing new seed of that crop.

If you start seeds under grow lights or fluorescent shop lights indoors, check the tubes for signs of age. Tubes that have been used for several seasons have probably lost much of their intensity even though they look fine. Dark rings on the ends of the tubes are a sign they need to be replaced.

Although a sunny windowsill is an ideal spot for sun-loving houseplants, be sure that the plants are not touching the glass or they could be damaged by the cold. Since heating vents are often located underneath windows, plants are prone to drying out quickly if you have such forced air heat. You may want to move plants to a different location, perhaps under grow lights, until spring.

If you've noticed tiny, black flying insects that look like fruit flies around your houseplants, they are probably fungus gnats. Though annoying when they fly about, they are harmless. Their tiny, worm-like larvae feed on organic matter in moist soil, which can include plant roots. To control them, allow the soil to dry out between waterings, use sticky traps, or drench soil with a biological control.

Potatoes, onions, carrots, turnips, and other root crops that you have stored in your root cellar or basement should be checked regularly for signs of decay. Vegetables that show any rotting should be removed immediately so they don't spread the disease to other vegetables and spoil the entire bushel or box full.

If you plan to order bare root fruit trees or plants, now is the time to order them. Bare-root trees are shipped in late winter or early spring before they start to grow. Trees will be shipped for planting time in your area, and should be planted upon arrival to prevent drying out. Follow the planting instructions on the package or label. Most bare root plants need to be soaked in water a few hours before planting.

Before the main pruning season starts, take apart hand pruners and shears, sharpen the blades, oil the levers, and remove any rust. Pruning trees will go much faster and be easier on your hands when you use sharp, well-maintained equipment. Speaking of tools, if the handles of your small tools are faded or made of wood, why not paint them so you can easily find them in the garden.

Pay extra attention to the needs of birds this winter. If you are feeding them, check feeders every few days and fill them as needed. Black oil sunflower seeds and white millet will attract cardinals, goldfinches, black-capped chickadees, purple finches and nuthatches to your yard. Ear corn, shelled, or cracked is a favorite of many other species including blue jays and mourning doves. Some birds prefer suet cakes, especially the woodpeckers.

Clean the feeders periodically as moldy seed can make birds sick. Clean out old seed and debris then scrub with a mixture of water and chlorine bleach (one ounce of bleach per gallon of water). Rinse well and allow to dry before adding new seed. In between cleanings, when refilling hanging feeders, shake to dislodge compacted seed. Dump out wet clumps of old seed. If possible, provide a source of water for the birds. A heated birdbath is ideal. Purchase one with an automatic shut-off valve or heat cycling on-off switch, which will prevent damage to the birdbath if goes dry. Use a grounded, three pronged outlet to prevent the possibility of electrocution.

Valentine's Day will be here before you know it. Traditionally, long-stemmed, red roses are associated with this holiday although carnations, tulips, and other flowers are catching up in popularity. So are sweetheart or miniature roses, which are just as attractive, but not as expensive as tea roses and come in the same range of colors from red and pale pink to white, cream, lavender, peach, salmon and yellow. An alternative to roses is to buy, or have your florist make up, a mixed bouquet with a red-pink-white color scheme. Possibilities include carnations, daisies, freesia, and tulips as well as more exotic choices like Peruvian lily (*Alstromeria*), red ginger, or red anthurium. Add a few sprigs of baby's breath and some greenery for the finishing touch.

If you receive cut flowers, place them in a vase with water and floral preservative. Use warm, not hot water, which is taken up quicker by the stems. Replace water every three or four days, and re-cut about a half inch off of stems each time you change the water. Place flowers, cut or potted, in a cool, not cold, location for longest bloom. Wrap the flowers well to protect against the cold, as chilling February temperatures can damage the delicate blooms.

By following these tips you can enjoy the winter season and prepare for the warmer days of spring.

# LIVESTOCK NOTES

Chris Zumbrunnen

660-265-4541

## **DEVELOPING QUALITY REPLACEMENT HEIFERS FOR TOMORROW'S BEEF INDUSTRY**

What strategy you use to replace females in your herd has great long-term effects on cow herd profitability. During times of high calf prices the temptation to purchase bred cows (especially older, lower priced ones) is great. On the surface it appears to make sense to turn dollars quick by minimizing your inputs (the cost of the cow) while you maximize your income (selling a calf on a high market). However, as a producer you need to also evaluate the longer term effects of replacement choices and the impact of those on the overall reproductive performance of your herd. The decision to breed heifers to replace culled cows involves careful consideration of the economic well being of your operation as well as the reproduction status and breed type or genetic make-up of the heifers involved. In short, you may be buying a bred female that is lower in fertility while at the same time you are selling heifer calves that are genetically superior to the females you are buying.

If, in the future, only a part of what is predicted for the beef industry comes to pass the genetic make-up of calves will become more and more important all the time. In many herds there is a great deal of thought, time and money that goes into sire selection and it pays off when calves are sold. In some of these same cases, however, half of the potential reward for your sire selection effort is not realized as all of the heifer calves are sold as feeder calves. The reasons I most often hear as to why some producers sell all their heifer calves and purchase bred cows are that heifers wean calves that are lighter than those weaned by mature cows and that heifers are too much trouble to calve. In both cases the genetics of the heifers and the



management they receive both prior to and after calving has a huge impact on performance and calving problems.

The University of Missouri has a program known as the Show-Me Select Replacement Heifer Program that involves the utilization of management practices that can help insure that the heifers with the greatest reproductive potential are identified prior to the breeding season as well as incorporating management practices that have been proven to greatly help reduce calving difficulty. The program has been very successful for producers that have implemented it into their herds. In many cases the instances of heifers needing assistance when they calve has dropped from the national average of more than 20% to less than 10% which is about the national average of mature cows needing assistance to calve. The management practices in the program can greatly help remove many of the potential problems many producers worry about with calving heifers.

If you are interested in learning more about the Show-Me Select Replacement Heifer program or would like to participate in the 2007 Show-Me Select Replacement Heifer program contact the livestock specialist in your area or Chris Zumbrunnen, Sullivan County Extension Center, 660-265-4541 or e-mail [zumbrunnenc@missouri.edu](mailto:zumbrunnenc@missouri.edu). We had a very successful Show-Me Select sale December 2 at Green City Livestock. That sale averaged \$1323 per head which was the highest average of all the SMS sales held this fall. **The enrollment deadline to be eligible to sell heifers in one of the special Show-Me Select sales next fall is February 1, 2007. All you need to do is let me know you want to participate and I will get you additional information**

## **CONDENSED DISTILLERS SOLUABLES (SYRUP) PROJECT**

Last winter we ran a project at FSRC using 73 spring born open heifers that were randomly divided into 3 treatments by age and weight. The treatments we used were:

**Treatment #1:** Heifers fed free choice hay and 5 lbs of soy hulls per day.

**Treatment #2:** Heifers fed free choice hay and 5 lbs of soy hulls with the addition of 2 pounds of CDS per day added to grain ration.

**Treatment #3:** Heifers fed free choice hay and 5 lbs of soy hulls with the addition of having access to free choice CDS in a wheel type lick tank

The heifers were weighed onto the project on December 2, 2005. Body weights were taken every 28 days. Final weights, pelvic measurements, reproductive tract scores and frame scores were taken on March 15, 2006. At this point, 50 heifers were selected to be bred as replacement females for the spring calving herd at FSRC and were sorted; the 23 culled heifers were sold. The 50 replacement heifers were synchronized using a 14 day CIDR protocol and were time bred by artificial insemination to Cherokee Canyon, a Red Angus bull. No clean up bull was used.

A few observations on the heifers and using CDS include:

- The heifers on the lick tank carried visibly more flesh at the end of the feeding period than did the other 2 treatments
- Consumption of CDS for the heifers on the lick tank was 14.8 pounds per day during the first 30 days. It appeared that there was a lot of social activity around the lick tanks. To try to offset this, 3 of the 4 lick wheels in each of the tanks was removed and CDS consumption dropped to around 10.5 pounds per day.
- There were only 4 days during the winter feeding period when the wheels in the lick tanks froze.
- The CDS was stored in poly or fiberglass tanks and never froze in the storage tanks.
- The product comes out of the storage tanks at the ethanol plant at close to 200 degrees. We

had no problem hauling or storing it in poly tanks

- The storage life of CDS from our observations seemed to be three to four weeks in the winter months and one to two weeks during the summer. The warmer the weather the quicker the solid portion of the product settled out from the liquid portion and mold growth started.

- To make CDS a viable feed supplement enough on farm storage must be available to accommodate receiving a large quantity at one time to reduce freight costs. The amount received at one time must be a quantity that can be used up within the above mentioned shelf life or storage times. In some areas two or more producers have gone together to purchase full or half semi loads of CDS at one time in order to reduce delivery costs while at the same time feeding the product before it goes out of condition.

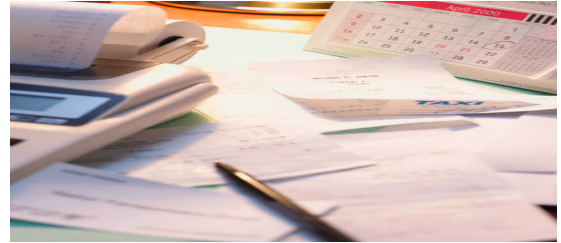
### **Performance and Breeding Data**

	<b>TRT 1 NO CDS</b>	<b>TRT 2 LIMIT FED CDS</b>	<b>TRT 3 FREE CHOICE CDS</b>
<b>Body Weight 12/02/2005</b>	634.8	637.7	627.7
<b>Body Weight 3/15/2006</b>	805.1	839.9	874.4
<b>103 day ADG</b>	1.66	1.96	2.40
<b>ADG Diff From Control</b>	0	+ .30	+.74
<b>Avg. Daily CDS lbs/head/day</b>	0	2	13.3
<b>Cost of CDS per head per day</b>	0	\$0.02	\$0.133
<b>Cost of additional gain</b>	0	\$0.07	\$0.18
<b>AI Pregnancy Totals/%</b>	9/15 60%	10/15 67%	13/20 65%

# AGRI-BUSINESS SPECIALIST

## Darla Campbell

660-457-3469



### EMINENT DOMAIN

This is a topic that has been getting a lot of press in recent months even though the principle has been around for hundreds of years. The passage of House Bill 1944 in 2006 has made a few changes regarding eminent domain. This is a summary of those changes.

Those who can utilize eminent domain include governmental entities or agencies whose governing body is elected or appointed by elected officials, private utility companies, public utilities, rural electric cooperatives, municipally owned utilities, pipelines, railroads and common carriers. The bill specifies that private property may only be taken through the use of eminent domain after determining blight of the property or the taking is for a public use and not without just compensation. Farmland will not be determined to be blighted – in other words, farmland would have to have another reason or basis for being taken other than blighted. Those may include such classification as substandard, unsanitary or a conservation area as defined in RSMo.99.805.

The bill defines and requires that for all condemnations filed after December 31, 2006, just compensation for property be determined by fair market value, homestead taking which is fair market value multiplied by 125% or heritage taking which is fair market value multiplied by 150%. This requires the circuit judge presiding over the condemnation to determine after the filing of the commissioners' report whether a homestead taking has occurred and whether heritage value is to be paid to the property owner.

All displaced residential individuals eligible for assistance will get \$1,000 fixed moving expense payment or the actual reasonable costs of relocation not including the cost of replacement property. Displaced businesses eligible for relocation can choose to get a \$3,000 fixed moving expense or the actual costs of moving and up to \$10,000 for reestablishment expenses.

At least 60 days prior to initiating negotiations to acquire a property interest, the condemning authority must give a written notice to the owner of record identifying the interest in real property to be acquired, the purpose for which the property is being condemned, and a statement of the property owner's rights including the right to seek legal counsel, to make a counteroffer and engage in negotiations, to obtain the landowner's own appraisal, to contest the condemnation proceeding and to have just compensation determined preliminarily by court appointed condemnation commissioners and ultimately, a jury. The jury will consider the same factors as those used for determining just compensation when blighted property or property for a public use is taken. If the property owner obtains his or her own appraisal, it must be delivered to the condemning authority within 60 days from the date of the notice. A written offer must be presented to the property owners of record at least 30 days before filing a condemnation petition.

Before a condemning authority may proceed with a condemnation, there must be a court determination that proper and timely notice was given to all property owners, an initial offer no lower than the appraisal amount was given, and that the landowner was given an opportunity to obtain his or her own appraisal from a state-licensed or state-certified appraiser of his or her choice. If the court finds good faith negotiations have not taken place, the court must dismiss the condemnation petition and order the condemning authority to reimburse the owner for his or her actual reasonable attorney fees and costs. If the condemning authority abandons condemnation prior to the final judgment of the court, then the landowner's legal fees and expenses and award damages as a direct result of the condemnation must be paid.

No condemning authority can get private property through the use of the power of eminent domain for solely economic development purposes, defined as a use of a specific piece of property which would provide an increase in the tax base, tax

revenues, employment, and general economic health for any political subdivision.

The condemning authority is required to individually consider each parcel of property in an area with regard to whether the property is blighted. If a preponderance of the area is blighted, they may proceed with the condemnation of any parcel in the area.

Property interests acquired through eminent domain by private utility companies, public utilities, rural electric cooperatives, municipally owned utilities, or common carriers are fixed and determined by the particular use for which the property was acquired. Any expanded use of the property will require additional proceedings to acquire the additional rights.

This bill establishes an Office of Ombudsman in the Office of Public Counsel within the Department of Economic Development to assist citizens seeking information on the condemnation process and procedures.

Blanket easements will be void as against public policy and will be unenforceable. Any easements acquired after December 31, 2006, and abandoned in whole for a period in excess of 10 years may be vacated by a court of competent jurisdiction and upon the property owner paying monetary consideration equal to the original consideration paid by the easement holder. The holder of the easement must be a party to the action and may be allowed to maintain the easement upon a showing, in good faith, that the holder plans to make future use of the easement.

Any financial gain to the property owner arising from a condemnation action can be deducted from the taxpayer's federal adjusted gross income when calculating his or her Missouri adjusted gross income.

Within 30 days of the initial notice by the condemning authority, a landowner may propose an alternative location on his or her property which must be considered by the condemning authority. This information has been obtained from the summary of HB1944T-Eminent Domain; Missouri House of Representatives; 93<sup>rd</sup> General Assembly, 2<sup>nd</sup> Regular Session. Last Updated November 29, 2006 at 9:45 am. The website for more detailed information is <http://www.house.mo.gov/bills061/bilsum/truly/sHB1944T.htm>

## **Certification and Recertification**

The private pesticide applicator license enables you to purchase and apply restricted use pesticides for the production of your agricultural commodities. If you wish to maintain your license, you can attend one of the training sessions from the schedule below, which I encourage you to do, or view the "Private Pesticide Applicator Training Certification and Recertification" video at your local University of Missouri Extension Center.

## **Private Pesticide Applicator Trainings**

1/22 Scotland County Courthouse  
Courthouse Courtroom 3-5 or 6:30-8:30 p.m.

1/23 Greenly Memorial Research Center  
3-5 or 6:30-8:30 p.m.

1/24 Shelby County Extension Center  
3-5 or 6:30-8:30 p.m.

1/25 Clark County Extension Center  
3-5 or 6:30-8:30 pm.

2/5 Schuyler County Courthouse Basement  
3-5 or 6:30-8:30 p.m.

2/6 Greenly Memorial Research Center  
3-5 or 6:30-8:30 p.m.

2/7 Scotland County Courthouse  
Courthouse Courtroom 6:30-8:30 p.m.

2/8 Shelby County Extension Center, 3-5 pm.

2/9 Clark County Extension Center  
3-5 or 6:30-8:30 pm.

## **Schuyler County Extension Night**

Come join us on March 15, 2007 at the Queen City Middle School for informational sessions, the Soil and Water Conservation District Annual Youth Poster Contest award winners, vendor displays and a meal prepared by the 4-H Council. The sessions will be on a variety of topics from Ag-Business to Livestock and Agronomy to Human Nutrition. The evening events will run from 6-9 p.m. and to sign up contact the Schuyler County Extension office at 660-457-3469.

# AGONOMY NOTES

**Dr. Leon McIntyre**

**660-895-5123**

## **MONSANTO AND PIONEER SLUG IT OUT!**

While farmers place their orders for next years crop, Monsanto and Pioneer are fighting for market share in the multibillion dollar market for genetically engineered seeds. Pioneer has been developing strains of biotech seeds while Monsanto has been aggressively buying up small seed companies to get better access to farmers. In 2004 Monsanto formed a holding company called American Seeds Incorporated with the goal of buying up regional seed companies and their dealers. Monsanto has owned DeKalb and Asgrow Seed Companies for many years. Through the American Seed holding company, Monsanto has bought these seed companies: Crows Seed Company, Wilson Seed Company, Midwest Seed Company, Fontanelle Seed Company, NC+ Seed Company, Stone Seed Company, Stewarts Seed Company, Trelay Seed Company, Specialty Hybrids Seed Company, Gold Country Seed Company, Heritage Seed Company, Diener Seed Company, Trisler Seed Company, Sieben Seed Company, Campbell Seed Sales, Doeblers Seed Company and Kruger Seed Company.

Just recently (December 4<sup>th</sup>), American Seeds Inc. of Monsanto purchased Landec Corporation Direct Seed Marketing and Sales Company for \$50 million. This purchase includes a customer call center and two seed companies, Fielders Choice and Heartland Hybrids, the 2 largest direct marketing hybrid seed companies. This recent purchase brought Monsanto neck and neck with Pioneer for the first time in the seed corn business.

Five years ago Pioneer had 40% of the seed corn market share while Monsanto had about 10% with its Dekalb and Asgrow Hybrids.

At present with the purchase of 17 regional seed companies plus Fielders choice and Heartland Hybrids, Monsanto has now about 29% of the seed corn market share and Pioneer has slipped down to 30%.

## **DUPONT, SYNGENTA ANNOUNCE JOINT VENTURE**

Dupont owns Pioneer Hi-Bred International Inc. and Syngenta Seeds Inc. owns Northrup King Seed Company, Garst Seed Company and Golden Harvest Seed Company.

DuPont and Syngenta in April 2006 announced a joint venture and licensing agreements that will give North American farmers broader access to the companies' corn and soybean genetics and biotechnology traits.

Syngenta Seeds Inc. and DuPont subsidiary Pioneer Hi-Bred International Inc. will form the seed industry's first 50/50 joint venture to out-license genetics to U.S. and Canadian seed companies, with potential to expand worldwide, according to a news release.

The two companies also agree to cross-license certain corn and soybean traits that each company will market independently under their own seed brands.

The agreement includes rights for Syngenta to market the new Optimum GAT herbicide tolerant trait developed by DuPont. The joint venture, Greenleaf Genetics LLC, will offer corn and soybean breeding material from DuPont and Syngenta.

It will also facilitate the licensing of biotech traits by both companies.

## **MISSOURI HERBICIDE UPDATE FOR 2007**

By Kevin Bradley

### **I. Corn**

Status is a herbicide from BASF that contains the same active ingredients as Distinct (dicamba + diflufenzopyr), but also contains the safener isoxadifen. Unlike Distinct, this will allow Status to be applied postemergence to corn from 4 to 36 inches in height without drop nozzles. Status can be

applied with a nonionic surfactant, crop oil concentrate, or methylated seed oil. In our trials, we observed no differences in weed control between postemergence applications of Status and Distinct. The remaining stocks of Distinct will be sold out and Status will essentially replace Distinct over time.

Autumn is a new herbicide from Bayer Crop Sciences that is available for use as a fall-applied herbicide prior to corn planting. Autumn can also be applied up to 30 days before corn planting in the spring. Autumn is not labeled for use on areas that will be planted to soybeans. Autumn is an ALS-inhibiting herbicide which contains the active ingredient iodosulfuron. It should be applied at a rate of 0.3 oz/a. Autumn should be applied with a crop oil concentrate at 1 % v/v and a nitrogen fertilizer. In our research with Autumn last year, we observed good control of henbit and common chickweed with fall applications of Autumn or Autumn plus 2, 4-D. Similar levels of henbit and chickweed control were also achieved with Basis plus 2, 4-D and Princep plus 2, 4-D. The addition of 2, 4-D increased control of annual fleabane and corn speedwell compared to applications of Autumn alone. Although we have not evaluated these weeds in our trials, other university researchers have also observed good field pennycress, shepherd'spurse, purple deadnettle, marestail, and dandelion control with applications of Autumn plus 2, 4-D in the fall.

Impact (topramezone) was first available for use last year, but will be discussed briefly as many are still unfamiliar with this product. Impact is a new herbicide from AMVAC that is a HPPD-inhibiting "bleacher" herbicide like Callisto. Impact can be applied postemergence in corn at either 0.5 or 0.75 fluid ounces per acre. In our trials conducted last year, Impact provided similar levels of broadleaf weed control as Callisto, but slightly higher levels of grass control. Both products are enhanced significantly by the addition of atrazine.

Stout is a new premix from DuPont that contains nicosulfuron (Accent) and thifensulfuron (Harmony GT) and is registered for use primarily for grass weed control in corn. Stout may be applied at 1/2 to 3/4 ounce per acre to corn that is up to 16" tall and exhibiting up to and including 5 leaf collars.

## **II. Soybean**

Prefix CP is a new co-pack from Syngenta that contains S-metolachlor (Dual II Magnum) and

fomesafen (Reflex or Flexstar). Later in 2007, it is expected that this product will become a premix (both ingredients mixed in one bottle) but at least initially in 2007 this will be sold as a co-pack where one package contains one bottle of S-metolachlor (which actually has Prefix on the label) and one bottle of Reflex.

The typical use rate of this product will deliver 1 pint per acre of Dual II Magnum and 1 pint per acre of Reflex. Prefix CP is labeled for preemergence weed control in soybeans and in our trials during the past year, this product has performed similar to Boundary, which is the product from Syngenta that this herbicide will replace.

Sonic and Authority First are identical products from Dow AgroSciences and FMC, respectively. They both contain the active ingredients sulfentrazone (Spartan) and cloransulam (Firstrate) and are registered for use preemergence in soybean at planting or within three days of soybean planting. These products should provide good control of a wide spectrum of broad leaf weeds including waterhemp, lambsquarter, moningglory, ragweeds, cocklebur, and others.

Canopy is now being marketed and sold again from DuPont for preemergence weed control in soybeans. Canopy can also be applied as a burndown product or as part of a burndown program in no-tillage systems. This is the Canopy formulation that contains chlorimuron (Classic) plus metribuzin (Sencor). Remember that Canopy EX is another product from DuPont that contains chlorimuron (Classic) plus tribenuron (Express), and is primarily utilized for winter annual weed control in the fall-applied market. Canopy may be applied at planting or up to 45 days before planting and provides residual control of a number of small-seeded grass and broadleaf weeds.

## **III. Wheat**

Axial is a new herbicide from Syngenta for use in wheat for the control of winter annual grass weeds like wild oat and annual or Italian ryegrass. However, Axial does not provide control of cheat or downy brome, which are two of our most common winter annual grasses encountered in wheat production in Missouri. Axial (pinoxaden) is labeled for use at 8.2 ounces per acre and should be applied with the Adigor adjuvant at 9.6 ounces per acre.

The following publications are available at your local University of Missouri Extension office.

- G-520 Oral Farm Agreements Under MO Law
- G-851 Stockmen's Liability Under the Missouri Nuisance Law
- G-1731 Wood Stove Maintenance and Operation
- G-2083 Calculating Fertilizer Value of Supplemental Feed for Cattle on Pasture
- G-2230 Body Condition Scoring of Beef & Dairy Animals
- G-4857 Agriculture Owners: Family Labor & The Worker Protection Standard

**WEB SITES TO CHECK OUT:**

By-Product Feed Prices:

<http://agebb.missouri.edu/dairy/index.htm>

Forage Systems Research Center Updates:

[www.aes.missouri.edu/fsrc](http://www.aes.missouri.edu/fsrc)

Farm Leases:

<http://www.farmdoc.uiuc.edu/pubs/Legal.asp?Subject=Aquiring&Subclass=Lease>

Marketing:

<http://valueadded.missouri.edu/newsletter>

Missouri Alternative Center:

<http://agebb.missouri.edu/mac>

Statewide University Extension Calendar

<http://access.outreach.missouri.edu/uoecalendar>

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